



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP14-026**

1. Agenda Item Number:

35

2. Council Meeting Date:
August 15, 2013

TO: MAYOR & COUNCIL

3. Date Prepared: August 5, 2013

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Carollo Engineers, Inc., for Sewer Assessment Evaluation.

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Carollo Engineers, Inc., for Sewer Assessment Evaluation, pursuant to Annual Contract EN1309-101, Project No. WW1402-101, in an amount not to exceed \$371,597.

7. BACKGROUND/DISCUSSION: The 2008 Wastewater Master Plan identified an on-going need to evaluate, prioritize, and repair sewer lines and manholes within the City's collection system. This project will identify the structural condition of the sewer collection system. The result will be a prioritized program to rehabilitate, repair, or replace wastewater collection sewer lines and manholes. Inspections will be conducted through closed circuit television (CCTV) inspection of sewer pipelines and manned entry inspections for sewer manholes. The project will also assess wastewater collection system odors. Wastewater facility rehabilitation projects will be brought forward for Council approval as they are identified.

8. EVALUATION: This project is being performed under the Annual Permitting, Study, Design, and Post-Design Services for Water and Wastewater facilities, Contract No. EN1309-101, to Carollo Engineers, Inc. The costs proposed for this project have been evaluated by staff and are determined to be reasonable. The contract time is 365 days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$371,597
Savings: N/A
Long Term Costs: N/A

Fund Source:

<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
611.3910.6812.6WW266	Wastewater Bond	Sewer Assessment & Rehabilitation	Yes	\$371,597

10. PROPOSED MOTION: Move City Council award a Project Agreement to Carollo Engineers, Inc., for Sewer Assessment Evaluation, pursuant to Annual Contract EN1309-101, Project No. WW1402-101, in an amount not to exceed \$371,597.

ATTACHMENTS: Project Agreement

APPROVALS

11. Requesting Department

John Knudson, Utilities Engineering Manager

13. Department Head

Dave Siegel, Municipal Utilities Director

12. Transportation & Development

Bob Fortier, Capital Projects Manager

14. City Manager

Rich Dlugas

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1309-101**

PROJECT AGREEMENT NO: WW1402-101

This PROJECT AGREEMENT is made this _____ day of _____, 2013, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Carollo Engineers, Inc. a Delaware corporation, licensed to do business in the State of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1309-101.

CITY and Carollo Engineers, Inc., in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is Sewer Assessment Evaluation, Project Number WW1402-101. The scope of work consists of identifying the structural condition of the sewer collection system manholes, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

The Annual Consultant shall not accept any change of scope, or change in contract provisions, unless issued in writing, as a contract amendment and signed by the Contract Administrator.

ARTICLE 2 - CONTRACT PRICE:

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed Three Hundred Seventy One Thousand Five Hundred Ninety Seven Dollars (\$371,597) determined and payable as set forth in Annual Contract EN1309-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is Three Hundred Sixty Five calendar days and Annual Consultant agrees to complete all work within Three Hundred Sixty Five (365) calendar days of the date CITY issues a Notice to Proceed.

ARTICLE 4 - GENERAL:

This Project Agreement is entered into pursuant to Annual Contract No. EN1309-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Project Agreement on the day and year first written above.

This Project Agreement will be effective on this _____ day of _____, 2013.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: David Quao
Title: SR. VICE PRESIDENT

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE

Carollo Engineers, Inc.
4600 E. Washington St., Ste. 500
Phoenix, AZ 85034
Phone: 602-263-9500
Fax: 602-265-1422

APPROVED AS TO FORM:

City Attorney By: [Signature]
ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

GENERAL PROJECT DESCRIPTION

The City of Chandler (City) proposes to continue with its program to inventory and evaluate their existing sewer collection system. The main purpose of this assessment study is to identify the structural condition of the sewer collection system manholes so that a prioritized program of rehabilitation, repair, and replacement can be enacted and structural failures can be prevented. This assessment will be accomplished through closed circuit television (CCTV) inspection of manholes. All manholes will be inspected using manned entry inspection procedures. ANNUAL CONSULTANT will integrate the manhole CCTV inspection files developed under this Project into the Wincan V8 software for archiving and retrieval. By archiving the CCTV files using Wincan V8, the City will be able to readily retrieve the CCTV inspection files.

In addition to the manholes inspection work, ANNUAL CONSULTANT will continue their work in assessing high odor areas of the City's collection system, identifying options to mitigating those odors, and producing a Technical Memorandum with conclusions and recommendations for next steps.

The work to be performed for the project consists of the following tasks:

- Task 1 - Project Management Services
- Task 2 - Development of Inspection Priorities
- Task 3 - Sewer Manholes Evaluation and Recommendations for Rehab
- Task 4 - Integration of Manhole CCTV Files into Wincan V8.
- Task 5 – Project No.1 – Sewer Manholes Rehab Design
- Task 6 – Project No.1 – Bid Phase Services
- Task 7 – CM Phase Services – Project No.1
- Task 8 – Collection System Odor Study – Field Services
- Task 9 – Collection System Odor Study – Office Services and TM

PROJECT ASSUMPTIONS

The following assumptions are considered inclusive to the Scope of Services:

1. ANNUAL CONSULTANT will utilize manned entry inspection when inspecting sewer manholes to determine the severity of deterioration. Carollo assumes that 150 manholes will be inspected.
2. ANNUAL CONSULTANT will utilize the City's existing GIS for project mapping and sewer information.
3. The CCTV Field Subcontractor(s) will arrange for all required traffic control. The City will not provide assistance for traffic control.
4. Where manholes are located in easements or residential yards, City assistance in the form of in-person notification may be necessary.
5. ANNUAL CONSULTANT will field measure the height and diameter of each manhole.
6. ANNUAL CONSULTANT will utilize the City's external hard drive and Wincan V8 software to organize and archive CCTV videos and data obtained under this project.
7. ANNUAL CONSULTANT's Fee proposal is based upon a specific quantity of anticipated RFIs, submittals, meetings, and duration of construction project. Should these anticipated quantities be exceeded, ANNUAL CONSULTANT reserves the right to negotiate with the City for potential additional compensation, if warranted.

SCOPE OF SERVICES

TASK 1 - PROJECT MANAGEMENT SERVICES

ANNUAL CONSULTANT shall perform project management and monitoring activities throughout the Project duration, as delineated in the following tasks.

1.1 Project Management

ANNUAL CONSULTANT shall provide project management services to include directing the activities of the project team members (including Subcontractors), regularly monitoring progress of the work and the budget, preparing progress and activity reports, communicating with the City staff on technical issues and problems encountered, schedule updates, and monitoring and updating the project schedule as appropriate.

1.2 Project Progress Meetings

This task includes a total of eight (8) project progress meetings to be held with City staff at the Municipal Utilities Department (MUD) Complex conference room. The progress meeting will review efforts completed to

EXHIBIT A (cont.) SCOPE OF WORK

date, provide project progress updates, and gather continued direction and feedback from the City. ANNUAL CONSULTANT shall prepare and distribute agendas prior to and minutes following each meeting.

TASK 2 - DEVELOPMENT OF INSPECTION PRIORITY

2.1 Development of Inspection Priority

ANNUAL CONSULTANT shall select pipes and manholes for CCTV inspection based on discussions with City staff and from a review of which manholes were inspected during Phases 1 and 2. The goal of this task is to develop a prioritization for the physical inspection work plan, and to allocate the CCTV and manhole inspection budgets to the areas of highest priority. Other manholes to consider include manholes located near areas of odor complaints, regardless of whether they were inspected after Phase 1 and 2.

ANNUAL CONSULTANT shall also coordinate with the City's Street's department 5-year CIP program to check manholes related to those projects. ANNUAL CONSULTANT shall inspect known areas of surcharging sewers, such as at the Jacaranda / Dobson area.

TASK 3 - SEWER MANHOLES INSPECTIONS

ANNUAL CONSULTANT shall provide coordination for the inspection program, making arrangements for meetings as necessary, and keep City staff informed of the work progress.

The Subcontractors will provide all traffic control required to inspect the sewer pipelines and manholes identified under this work.

3.1 Develop GIS Maps for Field Inspections

ANNUAL CONSULTANT shall develop GIS-based maps to show the manhole/pipe configuration and intersection details for each proposed inspection. It is anticipated that the Subcontractors will use these maps to develop their site-specific inspection plans for their crews and will use these for developing the required traffic control plans (TCP).

3.2 Coordinate Field Inspection Activities

ANNUAL CONSULTANT shall identify the manholes to be inspected and will prepare information packets for the field crews (Subcontractors). Inspection data will be recorded on the forms using the defect condition codes identified in previous sewer system assessment work with the City. The Subcontractor(s) will provide all equipment required for the CCTV inspections.

3.3 Conduct Manned Entry CCTV Manhole Inspections

ANNUAL CONSULTANT shall conduct manhole inspection of identified manholes. ANNUAL CONSULTANT shall complete a Manhole Inspection Form for each inspected manhole or structure using procedures developed by ANNUAL CONSULTANT under previous field inspection projects with the City. ANNUAL CONSULTANT shall enter this information into the Wincan V8 database during Task 5.

3.4 Evaluate Field inspections and Identify Rehab Project No.1

ANNUAL CONSULTANT shall evaluate the manhole field inspections and identify which manholes need rehabilitation, replacement, or re-inspection. It is desired to group manholes into Project No.1 so that an entire segment of interceptor sewer has been rehabilitated. This might mean including manholes that are marginal, if by doing so that interceptor segment is brought into the same level of service with the adjacent manholes on that segment.

The Project No.1 manholes grouping will be based on the estimated construction cost of rehabilitation or replacement, and in collaboration with City staff recommendations.

TASK 4 - INTEGRATION OF MANHOLE CCTV FILES INTO WINCAN V8

4.1 Organizing and Linking the CCTV Files

After collecting the CCTV video and data inspection files from both the manholes inspected in the field by the Subcontractors, ANNUAL CONSULTANT shall review for completeness, and after acceptance will organize by individual sewer system collection basin. All inspection videos will be placed in the City's external hard drive.

TASK 5 – PROJECT NO.1 – SEWER MANHOLES REHAB DESIGN

EXHIBIT A (cont.) SCOPE OF WORK

5.1 30% Detailed Design Drawings and Specifications

ANNUAL CONSULTANT shall prepare 30% detailed design drawings and technical specifications for the identified manholes and structures rehabilitation project for review by the City. ANNUAL CONSULTANT shall prepare contract documents using GIS mapping for showing spatial location of manholes and structures to be rehabilitated, and CCTV digital technology for the display of information to assist the Contractor in bidding the work.

No field survey information will be collected to develop drawings since the rehabilitation is assumed to be related only to individual manholes and structures. ANNUAL CONSULTANT shall collect and review utilities adjacent to the project area for potential impact by this project.

ANNUAL CONSULTANT shall provide five (5) full-sized (24 x 36) and four (4) half-sized (12 x 18) sets of drawings along with a Table of Contents (TOC) with a complete technical specification of the selected rehabilitation method(s) for review by the City.

5.2 90% Detailed Design Drawings and Specifications

ANNUAL CONSULTANT shall prepare 90% detailed design drawings, bid schedule, and technical specifications for review by the City. ANNUAL CONSULTANT shall address all of the City's review comments on the 30% design and shall incorporate adopted comments into the drawings and specifications. Utilities adjacent to the project area that are determined to be significant to the proposed work will be shown on the drawings.

ANNUAL CONSULTANT shall provide five (5) full-sized (24 x 36) and four (4) half-sized (12 x 18) sets of drawings along with complete technical specifications for review by the City.

5.3 Bid Ready Drawings and Specifications

ANNUAL CONSULTANT shall prepare Bid Ready detailed design drawings, Bid schedule, and technical specifications for review by the City. ANNUAL CONSULTANT shall address all of the City's review comments on the 90% design and will incorporate adopted comments into the Bid Ready drawings and specifications. Bid Ready project documents will include DVDs containing project related CCTV videos and data.

ANNUAL CONSULTANT shall provide three (3) full sized (24 x 36) and four (4) half-sized (12 x 18) sets of drawings along with complete technical specifications for use by the City.

ANNUAL CONSULTANT shall also provide a master set of Contract Documents, and sealed and signed bond drawings for use by the City in the production of project documents for interested Bidders. The City will provide project documents to interested Bidders.

TASK 6 – PROJECT NO.1 – BID PHASE SERVICES

6.1 Pre-bid Conference and Minutes

ANNUAL CONSULTANT shall attend and support the City in the conduct of the project Pre-Bid conference. ANNUAL CONSULTANT will be on hand to answer questions related to the project design and intentions.

6.2 Responses to Questions and Addendum

ANNUAL CONSULTANT shall answer questions raised prior to, or during the Pre-Bid conference. Those questions that will substantively change the project design will be answered via Addendum. ANNUAL CONSULTANT shall prepare such Addendum, and will coordinate with the City to issue Addendum to Plan Holders.

6.3 Bid Opening and Evaluation

ANNUAL CONSULTANT will not attend the Bid Opening, but will assist the City in evaluating Bids. At the request of the City, ANNUAL CONSULTANT will provide written recommendation of award (ROA) to the lowest qualified bidder.

TASK 7 – CM PHASE SERVICES – PROJECT NO.1

7.1 Pre-Construction Conferences and Minutes

ANNUAL CONSULTANT shall conduct Pre-Construction Conference in support of Project No.1. ANNUAL CONSULTANT prepare conference agenda and issue minutes for the project meeting.

7.2 RFI Reviews, Responses and Archiving

ANNUAL CONSULTANT shall receive, respond to, and archive Requests for Information (RFI) developed by the Contractor. For purposes of developing a level of effort for the Fee proposal, it is assumed that fifteen (15) RFIs will

be generated by the Contractor for each project. A level of effort for a total of thirty (30) RFIs is included in this Fee proposal.

7.3 Submittal Reviews, Responses and Archiving

ANNUAL CONSULTANT shall receive, respond to, and archive technical submittals issued by the Contractor. For purposes of developing a level of effort for the Fee proposal, it is assumed that twenty (20) submittals will be generated by the Contractor for the project.

7.4 Periodic Field Visits

ANNUAL CONSULTANT shall visit the work from time to time, or as required by the City, to ascertain the progress and quality of the work up to a maximum of four (4) visits per month. The City will provide full-time field inspection for each project. No direction will be given to the Contractor directly from ANNUAL CONSULTANT. Only the City's inspector will give direction to the Contractor.

7.5 Bi-Weekly Progress Meetings

ANNUAL CONSULTANT shall attend bi-weekly progress meetings for the duration of construction, assumed to be 7 months. While the City will conduct the meetings, ANNUAL CONSULTANT shall attend, prepare, and distribute meeting minutes via email.

7.5 Record Drawings and Closeout Activities

The Contractor will maintain redlined As Builts of the work. At the completion of the project, the City's inspector will review the redlined drawings for completeness, and when accepted, will deliver to ANNUAL CONSULTANT who will then prepare Record Drawings.

ANNUAL CONSULTANT shall participate in each project punch list development, and final project walk through.

TASK 8 – COLLECTION SYSTEM ODOR STUDY – FIELD SERVICES

8.1 Identify Areas for Conducting Field Odor Studies

ANNUAL CONSULTANT shall meet with City staff and identify areas within the collection system having frequent odor complaints. Although many of these areas were identified under the Phase 6 project, their investigation was incomplete due to budget limitation. Task 8 will pickup where the Phase 6 work left off.

8.2 Coordinate with City staff on Odalog installations

ANNUAL CONSULTANT shall develop work plans for the installation of Odalog devices by City crews. It is assumed that up to three (3) separate work plans will be prepared under this Task. Calibration and cleaning of the Odalog devices will be by City staff.

8.3 Receive and evaluate field data from Odalogs

ANNUAL CONSULTANT will receive the data collected by City staff for each Odalog installed in the field during the tests conducted under Task 8.2 above, and shall evaluate the data. It is assumed that ANNUAL CONSULTANT does not need to purchase special software or hardware to read the collected data.

8.4 Collect and evaluate field data from wastewater samples

ANNUAL CONSULTANT shall take the lead in identifying where in the collection system wastewater grab samples will be taken for analysis. It is assumed that up to five (5) samples will be taken. The purpose of obtaining grab samples is to understand the source of the odors within the collection system so that an effective mitigation solution can be determined.

TASK 9 – COLLECTION SYSTEM ODOR STUDY – OFFICE SERVICES AND TM DELIVERY

9.1 Meet with City to discuss findings and solicit input

After completion of Task 8 above, ANNUAL CONSULTANT shall meet with the City staff to discuss findings, make recommendations, and solicit input as to "next steps". The goal of this effort is to develop odor mitigation plans for these odor-producing areas of the collection system.

9.2 Prepare and deliver Draft Technical Memorandum

ANNUAL CONSULTANT shall prepare and deliver six (6) copies of the Draft Technical Memorandum (TM) for review and comment. The TM will contain odor mitigation plans and associated cost estimates for implementation of each plan.

9.3 Prepare and deliver Final Technical Memorandum

After review and comment by the City of the Draft TM, ANNUAL CONSULTANT shall address all comments and deliver six (6) spiral bound copies and a PDF copy, on CD, of the Final TM to the City for distribution.

EXHIBIT B
FEE

		Categories							Task Sub Total
STUDY, DESIGN, and CM PHASE TASKS		Senior Professional	Lead Project Professional	Professional	Assistant Professional	Senior Technician	Clerical	SUBTOTALS	
Hourly Rates		\$225	\$198	\$170	\$145	\$135	\$ 85		
Task 1	Project Management Services								
1.1	Project Management	10	36	72	0	0	0	118	
1.2	Project Progress Meetings	0	32	32	0	0	12	76	
Subtotal Task 1.0		10	68	104	0	0	12	194	\$ 34,414
Task 2	Development of Inspection Priorities								
2.1	Development of Inspection Priorities	0	6	24	0	0	0	30	
Subtotal Task 2.0		0	6	24	0	0	0	30	\$ 5,268
Task 3	Sewer Manholes Evaluation and Recommendation for Rehab								
3.1	Develop GIS Maps for Field Inspections	0	2	16	32	24	0	74	
3.2	Coordinate Field Inspection Activities	0	2	12	28	0	0	42	
3.3	Conduct Manned Entry CCTV Manhole Inspections	0	2	16	32	0	0	50	
3.4	Evaluate Field Inspections & Identify Rehab Project No.1	0	2	20	36	0	0	58	
Subtotal Task 3.0		0	8	64	128	24	0	224	\$ 34,264
Task 4	Integration of CCTV Files into Wincan V8								
4.1	Organizing and linking the CCTV files	0	2	16	40	0	0	58	
Subtotal Task 4.0		0	2	16	40	0	0	58	\$ 8,916
Task 5	Project No.1 -Manhole Sewer Rehab Design								
5.1	30% Detailed Design Dwgs & Specs	0	6	16	48	16	16	102	
5.2	90% Detailed Design Dwgs & Specs	0	4	16	24	12	10	66	
5.3	Bid Ready Detailed Design Dwgs & Specs	2	4	12	16	12	10	56	
Subtotal Task 5.0		2	14	44	88	40	36	224	\$ 31,922
Task 6	Project No.1 - Bid Phase Services								
6.1	Pre-bid conference and minutes	0	6	6	6	0	0	18	
6.2	Responses to Questions and Addendum	0	4	16	16	6	6	48	
6.3	Bid Opening and Evaluation	2	4	4	0	0	0	10	
Subtotal Task 6.0		2	14	26	22	6	6	76	\$ 12,152

EXHIBIT B (cont.)

FEE

Task 7	CM Phase Services - Project No.1								
7.1	Pre-construction conference and minutes	1	6	6	0	0	4	17	
7.2	RFI reviews and responses (assume 10 total)	0	6	10	16	0	12	44	
7.3	Submittal reviews, responses & archiving (20 total)	0	4	18	32	0	48	102	
7.4	Periodic field visits (assume 7 month construction)	0	8	48	84	0	0	140	
7.5	Bi-weekly progress meetings	0	28	56	56	0	0	140	
7.6	Record Drawings & Closeout Activities	1	4	18	28	16	8	75	
Subtotal Task 7.0		2	56	166	216	16	72	518	\$ 77,658
Task 8	Collection System Odor Study - Field Services								
8.1	Identify areas for conducting field odor studies	1	6	16	16	0	0	39	
8.2	Coordinate with City staff on Odalog installations	0	4	12	24	8	0	48	
8.3	Receive and Evaluate field data from Odalogs	0	6	24	40	0	0	70	
8.4	Collect and Evaluate field data from wastewater samples	0	6	24	32	16	8	86	
Subtotal Task 8.0		1	22	76	112	24	8	243	\$ 37,661
Task 9	Collection System Odor Study - Office Services & TM Delivery								
9.1	Meet with City to discuss findings and solicit input	1	6	6	6	0	0	19	
9.2	Prepare and Deliver Draft Technical Memorandum	0	4	24	48	20	12	108	
9.3	Prepare and Deliver Final Technical Memorandum	1	4	16	24	12	10	67	
Subtotal Task 9.0		2	14	46	78	32	22	194	\$ 28,542
Total Labor Hours		19	204	556	684	142	156	1,761	
Total Labor Cost (Not to Exceed)		\$4,275	\$40,392	\$94,520	\$99,180	\$19,170	\$13,260	\$270,797	\$270,797

14.9%

DIRECT COST ALLOWANCES

1	Mileage (1 CM project) , printing, misc project expenses	\$ 800
2	AZ Manhole CCTV inspection subcontractor (Approximate - manned entry approx. 150 manholes)	\$ 75,000
3	Lab Testing Fees for wastewater sampling (Approximate)	\$ 25,000
Total Direct Cost Allowances		\$100,800
TOTAL CONTRACT AMOUNT		\$371,597